

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

LeRoy Koppendrayner  
Ken Nickolai  
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Chair  
Commissioner  
Commissioner  
Commissioner  
Commissioner

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PPM Energy, Inc.  
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Portland, OR 97209

SERVICE DATE: **MAR 20 2006**

DOCKET NO. PT-6530/WS-06-157

ORDER ACCEPTING APPLICATION AS  
COMPLETE AND APPOINTING PUBLIC  
ADVISOR

In the Matter of the Application of MinnDakota Wind, LLC, for a Large Wind Energy Conversion System Site Permit

The above entitled matter has been considered by the Commission and the following disposition made. The Commission hereby

1. accepts the MinnDakota Wind, LLC application for a site permit as complete under the requirements of Minn. Rules, Part 4401.0450; and
2. appoints Department of Commerce staff member Adam Sokolski as the Public Advisor.

The Commission agrees with and adopts the recommendations of the Department of Commerce which are attached and hereby incorporated in the Order.

BY ORDER OF THE COMMISSION



Burl W. Haar  
Executive Secretary

Attachments: Department Comments and Recommendations dated March 8, 2006 for Commission Meeting dated March 16, 2006

(S E A L)

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**BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION**

**COMMENTS AND RECOMMENDATIONS OF THE  
MINNESOTA DEPARTMENT OF COMMERCE  
ENERGY FACILITY PERMITTING STAFF**

**DOCKET NO. PT 6530/WS-06-157**

Meeting Date: March 16, 2006 ..... Agenda Item # 3

Company: MinnDakota Wind, LLC, an affiliate of PPM Energy, Inc.

Docket No. **PUC Docket Number: PT 6530/WS-06-157**

**In the Matter of the Application of MinnDakota Wind, LLC, for a  
Large Wind Energy Conversion System Site Permit.**

Issue(s): A) Should the Commission accept the Site Permit Application for a  
proposed 100 MW LWECS in Lincoln County, Minnesota?  
B) If the Application is accepted by the Commission, it is requested that  
the PUC also appoint a public advisor.

DOC Staff: David Birkholz.....651-296-2878  
Adam Sokolski .....651-296-2096

The enclosed materials are work papers of the Department of Commerce Energy Facility Permitting Staff. They are intended for use by the Public Utilities Commission and are based on information already in the record unless otherwise noted.

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## **Relevant Documents (in Commission Packet)**

MinnDakota Wind, LLC, LWECS Site Permit Application (#1)  
MinnDakota Wind, LLC, Amendment to Application

February 21, 2006  
To be filed before  
March 16, 2006

(Footnote: see eDockets (06-157) or the PUC Facilities Permitting website for additional documents <http://energyfacilities.puc.state.mn.us/Docket.html?Id=4967>)

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## **Statement of the Issue**

Should the Public Utilities Commission (the PUC or Commission) accept, conditionally accept, or reject the Large Wind Energy Conversion System (LWECS) Site Permit Application of MinnDakota Wind, LLC, an affiliate of PPM Energy? Should the PUC appoint a public advisor?

## **Regulatory Framework and Background**

A site permit from the Public Utilities Commission is required to construct a LWECS, which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. Minnesota Statutes, sections 116C.691 through 116C.697. The rules to implement the permitting requirement for LWECS are in Minnesota Rules Chapter 4401. A diagram of the permitting process is attached for illustration purposes.

Between 1995 and June of 2005, the Environmental Quality Board (EQB) issued 11 site permits for LWECS projects, totaling approximately 630 Megawatts and the PUC has issued one site permit for a 60 MW LWECS facility in September 2005. Those projects range in size from 10 MW to 107.5 MW located in the Minnesota counties of Lincoln, Pipestone, Murray, Jackson, Martin, Dodge and Cottonwood.

Currently, there are 3 LWECS site permits pending before the Commission, including the MinnDakota, LLC, Application. These permits represent up to 406.6 MW of wind energy nameplate capacity.

Minnesota Rules, part 4401.0460 requires the Commission to accept, conditionally accept or reject an application for a site permit. Within 15 days of issuing an order of application acceptance, the applicant is required to notify local governments and the public affected by the application.

Minnesota Rules, part 4401.0470 requires that upon the acceptance of an application, the Commission shall designate a staff person to serve in the role of a public advisor for the project. The public advisor shall answer questions from the public about the project, technology, and the permitting process. The public advisor shall not advocate on behalf of any person(s) nor give advice that affects the legal rights of persons being advised.

## **The Applicant and Project Ownership**

On February 21, 2006, MinnDakota Wind, LLC, filed an application for a LWECS site permit with the Commission. The Applicant will own the Project including all equipment and associated facilities up to the Yankee Substation. The Applicant will be responsible for the project development, management, procurement, construction, commissioning, long-term operation and ownership of the project.

MinnDakota Wind, LLC, is a wholly owned affiliate of PPM Energy, Inc, of Portland Oregon. PPM Energy develops wind projects across the United States and natural gas generation operations in the western U.S. PPM owns and operates the 100 MW Trimont Wind Project in Jackson and Martin Counties and the 51 MW Moraine Wind Project in Pipestone and Murray Counties, in Minnesota.

## **Project Location**

The MinnDakota Wind project site will be built in both Minnesota and South Dakota. The project's overall size is anticipated to be up to 199 MW in total.

The permit in Minnesota before the Commission proposes up to 100 MW of nameplate capacity. The balance of the development – up to 99 MW of nameplate capacity – will be built immediately across the state border in Brookings County, South Dakota.

The proposed project site in Minnesota is located in Lincoln County immediately west and northwest of Lake Benton. The project site is approximately 31,084 acres and overlaps with several existing wind projects (see Figures 1-3 and 5-3 in the Amended Application). MinnDakota's proposed wind turbines will be placed in the following Minnesota townships:

- Verdi (T 109 N, R 46 W Sections 1-18)
- Drammen (T 110 N, R 46 W Sections 6, 7 13-15, 18-36)
- Richland (T 110 N, R 47 W Sections 1, 12, 13, 24, 25, and 36)
- Shaokatan (T 111 N, R 46 W Sections 19, 30, and 31)
- Lake Hendricks (T 111 N, R 47 W Sections 24, 25, and 36)

The proposed site comprises primarily agricultural lands.

The Applicant has easements or options on the land necessary within the site to build the project. Land rights will encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads, electrical collection system, project substation and feeder lines. The electrical system and feeder lines may be located along public roads when possible.

## **MinnDakota Wind, LLC, Project Description**

The Applicant has not made a final selection of the wind turbine model, size and configuration and is seeking flexibility in permitting from the Commission. PPM is considering the General Electric 1.5 MW wind turbine generator, which is currently widely deployed and considered an industry standard. PPM is also considering other turbine models up to 3.0 MW in size.

Turbine size will have an affect on the layout of the project site and amount of land used. Historically, the permitting process has allowed applicants to be flexible in design and layout of wind farms, including allowing the permittee to amend a site permit to account for design changes, turbine availability, and other issues.

In its Application, the Applicant proposes up to 66 General Electric 1.5 MW wind turbines for an installed nameplate capacity of up to 100 MW. This turbine model has a hub height of 80 meters (262 feet) and a variable rotor diameter of 70.5 meters (231 ft) to 82 meters (296 feet). The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. PPM Energy estimates a 39 percent capacity factor for the project.

Final turbine foundation design will be dictated by turbine selected, geotechnical studies, tower load specifications and cost. The Applicant indicates that a typical turbine foundation is approximately 40-60 feet across and 4-8 feet thick.

The Application includes an electrical collection and transmission system. The electrical system brings electricity generated by each turbine to a pad mounted transformer where the voltage is stepped up to 34.5 kV. A series of collection lines from each wind turbine buried adjacent to turbine access roads will deliver electricity from each wind turbine to feeder lines. Lines will be buried unless obstructions or terrain require above ground construction. MinnDakota Wind proposes to construct 3-4 miles of above ground double-circuit 34.5 kV feeder lines in Minnesota to the Project Substation. The Application also proposes using the same 34.5 kV feeder lines to collect and deliver energy generated from the project in South Dakota to the Project Substation.

It is anticipated that the amount of land directly used for turbines and associated facilities would be approximately 44 acres including land impacted by 16 foot wide gravel access roads. If the Applicant were to select 33 3.0 MW turbines, direct land use impacts would be reduced to approximately 32 acres for turbines and access roads.

The proposed Project Substation will be located adjacent to the Xcel Yankee Substation where the electricity will be stepped up to 115 kV. MinnDakota will own the proposed electrical system up to its terminus at the low side busbar at the Yankee Substation.

Other project components in the Application include: all weather, gravel access roads; pad-mounted step-up transformers; concrete and steel tower foundations; a supervisory control and

data acquisition system (SCADA); meteorological towers; and, an operations and maintenance building.

The Xcel Energy Yankee Substation was issued a Certificate of Need (CON) under the Southwestern Minnesota transmission project and is scheduled to be completed by the autumn of 2007. The EQB issued Xcel Energy permits for the Yankee Substation and associated Buffalo Ridge to White 115 kV transmission lines in 2005.

A CON is not required for the MinnDakota Wind because the project was selected in Xcel Energy's 2001 Commission approved All Source RFP competitive bidding process.

The Applicant has a Power Purchase Agreement (PPA) with Xcel Energy that is pending Commission deliberation and decision.

The Applicant expects to begin construction of the MinnDakota Wind project as early as 2006 and be in service by the end of 2007. The project in-service date will coincide with the completion and in-service dates of Xcel Energy's Yankee Substation and associated transmission infrastructure.

### **Procedural Background**

**A. Application Acceptance.** Minnesota Rules, part 4401.0460 states that: "Within 30 days after receipt of an application for a site permit, the PUC shall accept, conditionally accept, or reject the application."

On February 21, 2006, PPM Energy filed a site permit Application for the MinnDakota Wind, LLC, with the Public Utilities Commission. The Applicant has informed Department of Commerce (DOC) Energy Facilities Permitting (EFP) staff that it will file an amendment to the Application prior to the March 16 PUC meeting. The site permit Application has been reviewed by DOC EFP staff pursuant to the requirements of Minnesota Rules Chapter 4401. The Application provides all of the information required by Minnesota Rules, part 4401.0450. Acceptance of the Application will require the applicant to notify local governmental units and landowners of the Application and initiate review requirements under Chapter 4401.

**B. Public Advisor.** Minnesota Rules, part 4401.0470 states: "Upon acceptance of an application for a site permit, the PUC shall designate a staff person to act as the public advisor on the project."

DOC EFP staff requests that Adam Sokolski be appointed as the public advisor for this project.

**C. Preliminary permit issuance determination.** Minnesota Rules, part 4401.0500 allows the Commission up to 45 days after an order is issued accepting an LWECS application to make a preliminary determination whether to issue or deny issuance of a site permit. As part of this process, the Commission reviews a draft LWECS site permit, which can be modified, rejected or approved by the Commission prior to public participation processes.

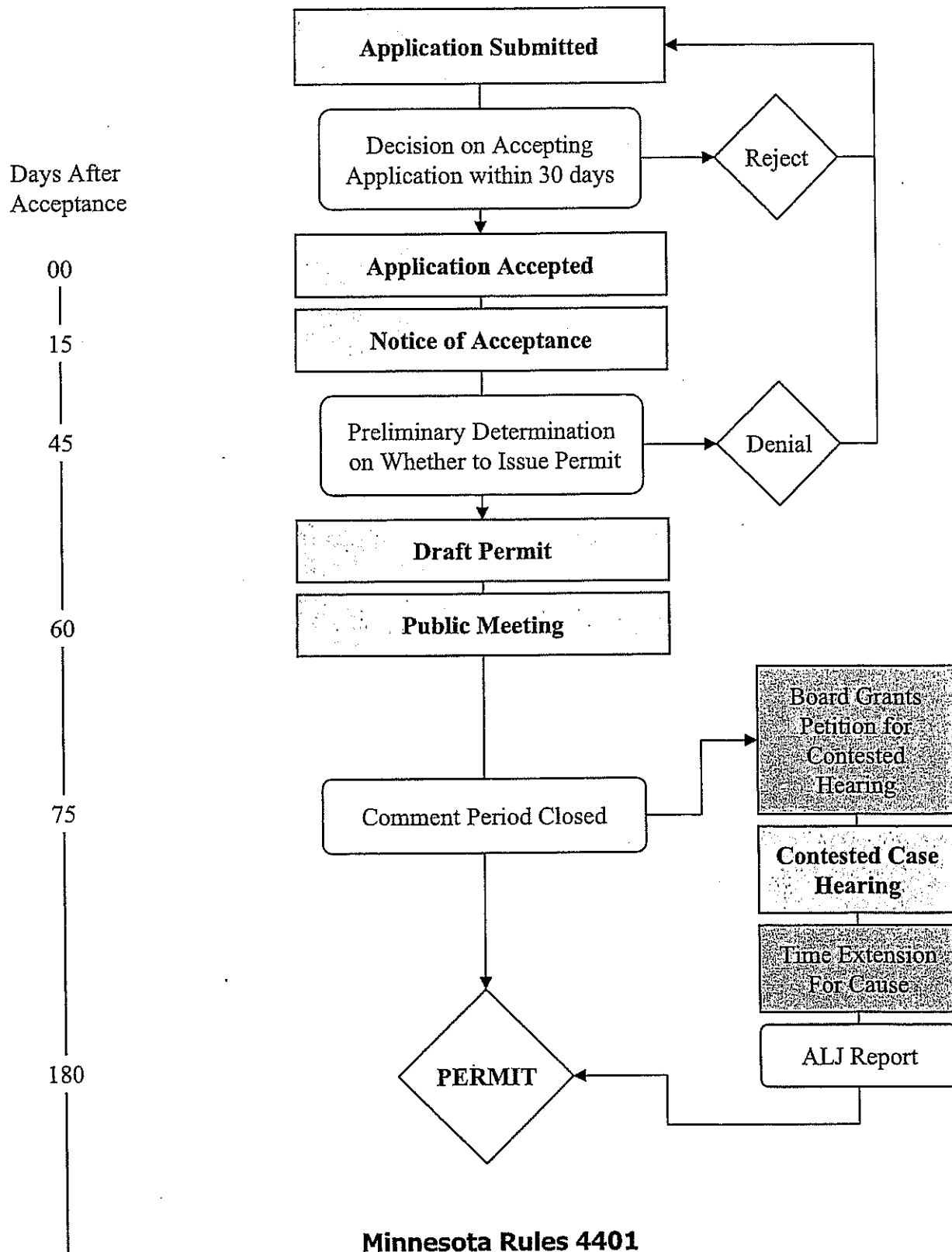
DOC EFP staff will bring this matter to the Commission for a draft permit determination at a later date. EFP staff will work with the Applicant to provide the Commission greater information and specificity regarding a request by the Company to reduce project setback distances in locations where adjacent lands “have no developable wind resource.”

#### **Commission Decision Options**

- A. Accept the MinnDakota Wind, LLC, Application for a site permit as complete under the requirements of Minnesota Rules, part 4401.0450 and appoint DOC EFP staff Adam Sokolski to serve as the public advisor on the project under Minnesota Rules, part 4401.0470.
- B. Reject the Application and advise the applicant in writing of the deficiencies in the Application and the manner in which the deficiencies can be addressed.
- C. Make some other decision deemed more appropriate.

**Department Staff Recommendation.** The DOC EFP Staff recommends Option A.

# Permitting Process for Large Wind Energy Conversion Systems



**Minnesota Rules 4401**  
**PUC Energy Facility**  
**Permitting**